

S Teachers'
351.5 Retirement System,
T1trsav State of Montana
1988 actuarial
evaluation as of
July 1

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1988

TEACHERS' RETIREMENT SYSTEM
STATE OF MONTANA
ACTUARIAL INFORMATION REQUIRED UNDER GASB #5
AS OF JUNE 30, 1988

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Introduction

This report presents actuarial information required under Statement No. 5 of the Government Accounting Standards Board. The results presented in this report were determined with generally accepted actuarial principles and techniques, and are in compliance with our understanding of GASB #5.

Alton P. Hendrickson
Member, American Academy of
Actuaries

PART A
PLAN DESCRIPTION

- | | | | |
|----|----|-----------------|---------------|
| 1. | A. | Covered Payroll | \$340,480,611 |
| | B. | Total Payroll | \$340,480,611 |

2. As of June 30, 1988, statewide membership in the Teachers' Retirement System consisted of:

Retirees and Beneficiaries Currently Receiving Benefits	6,275
Terminated Employees Entitled to But Not Yet Receiving Benefits	<u>4,470</u>
Total Inactives	10,745
Current Employees:	
Vested	10,131
Not Vested	<u>4,918</u>
Total Current Employees	15,049
Total Membership	25,794

A summary of benefit provisions is attached as Appendix 1. A detailed summary of membership is included as Appendix 2.

3. Benefit and contribution provisions are established by state law and may be amended only by the State of Montana legislature.

PART B
RELATED PARTY DISCLOSURES

Hendrickson, Miller & Associates, Inc. is under contract with the Teachers' Retirement System to provide actuarial and consulting services with regard to the retirement plan.

PART C

FUNDING STATUS AND PROGRESS

1. The last actuarial valuation of this system was performed as of July 1, 1987.
2. An actuarial update has been performed as of June 30, 1988 based on membership data provided by the system as of that date.
3. The following assumptions were used in calculation of the pension benefit obligation:

Rate of Return on Investment of Present and Future Assets - 8%
Projected Salary Increases - Inflation - 6.5%
Projected Salary Increases - Merit - .75%
Changes in Post-Retirement Benefit - None

The assumptions used in these calculations were the same as the assumptions stated in the report on the actuarial valuation of the Teachers' Retirement System as of July 1, 1987.

4. Actuarial Present Value of Projected Benefits:

Inactives:

Retirees and beneficiaries	\$404,575,392	
Other terminated employees	<u>19,324,685</u>	
Total inactives		\$423,970,077

Current employees:

Accumulated employee contributions	\$344,138,210	
Employer financed vested	212,956,356	
Employer financed nonvested	<u>18,287,100</u>	
Total current employees		\$575,381,666

Total Pension Benefit Obligation	\$999,351,743
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Net Assets Available for Benefits:

Cost	\$561,349,964
Market	\$620,814,560

Total Unfunded Pension Benefit Obligation	\$438,001,779
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There were no changes in actuarial assumptions or benefit provisions during the past year.

PART D

ACTUARIALY DETERMINED CONTRIBUTION REQUIREMENTS

AND CONTRIBUTIONS MADE

The TRS funding policy provides for periodic employer and employee contributions at rates specified by state law. The contribution requirement is not actuarially determined; however, an actuary does determine the actuarial implications of the funding requirement in a biennial actuarial valuation. The actuarial method used to determine the implications of the statutory funding level is the entry age normal funding method, with both normal cost and amortization of the unfunded accrued liability determined as a level percentage of payroll. As of July 1, 1987, the statutory rate was sufficient to fund the normal cost and to amortize the unfunded accrued liability under the entry age normal method over 36.47 years.

Contributions to the system as a percentage of covered payroll are as follows:

Employer	7.428%
Employee	<u>7.044</u>
Total	14.472%

These contributions are applied as follows:

Normal Cost	8.663%
Amortization of Unfunded Liability	<u>5.809</u>
Total	14.472%

During the past year, no changes were made in the method used to calculate or establish contribution requirements, nor were there any changes in the law affecting benefits.

SECTION E

TREND INFORMATION

	-----As of June 30-----		
	1988	1987	1986
Net assets available for benefits as % of PBO	56.2%	54.3%	51.6%
Unfunded PBO as % of annual covered payroll	128.6%	124.2%	126.3%
Employer contributions as % of annual covered payroll	7.428%	7.428%	7.428%

Employer contributions have been made according to state law, and have been determined to be adequate for funding of the system by biennial actuarial valuations, as described in Section D.

APPENDIX 1

SUMMARY OF BENEFIT PROVISIONS

Effective Date	September 1, 1937
Vesting Period	5 years. No benefits are payable unless the member has a vested right, except the return of employee contributions with interest.
Final Compensation	Average of highest 3 consecutive years of earned compensation.
Normal Form of Benefits	Life only annuity. All benefits cease upon death; however, in no event will the member receive less than the amount of employee contributions with interest.
Normal Retirement Benefits	
Eligibility:	25 years service or age 60.
Benefit:	The retirement benefit is equal to 1/60 of final compensation for each year of service.
Early Retirement Benefits	
Eligibility:	5 years of service and age 50.
Benefit:	The retirement benefit is calculated in the same manner as described for normal retirement, but the benefit is reduced 1/2 of 1% for each of the first 60 months early and 3/10 of 1% for each of the next 60 months early.
Death Benefits	
Eligibility:	5 years of service.
Benefit:	The death benefit is equal to 1/60 of final compensation for each year of service accrued at date of death with an actuarial adjustment based on the relation of the member's age at death to the beneficiary's age. A monthly benefit of \$100 is paid to each child until age 18. In addition, a lump sum benefit of \$500 is paid upon the death of an active or retired member.

Disability Benefits

Eligibility: 5 years of service.

Benefit: The disability benefit is equal to $1/60$ of final compensation for each year of service accrued at date of disability. The minimum benefit is $1/4$ of the final compensation.

Withdrawal Benefits

With less than 5 years of service, the accumulated employee contributions with interest are returned. With more than 5 years, the member may elect a refund of contributions with interest, or may leave the contributions and interest and retain a vested right to retirement benefits.

Tax Sheltered Annuity

The Teachers' Retirement System sponsors a tax-deferred annuity program for the benefit of its members. The policies of this program have been established in accordance with the guidelines set by the Internal Revenue Service. The benefits provided by this program are determined solely by the value of the member's account (voluntary contributions plus interest) using actuarial tables provided by the Retirement Board.

Contributions

Employee: 7.044% of compensation

Employer: 7.428% of compensation

APPENDIX 2

MEMBERSHIP DISTRIBUTION

Table 1 - Number of Full-Time Members

Table 2 - Average Salaries of Active Members

Table 3 - Annual Salaries of Active Members

Table 4 - Number of Part-Time Members

Table 5 - Number of Vested Inactive Members

Table 6 - Summary of Retirees

Table 7 - Summary of Disabled

Table 8 - Summary of Survivors

Table 9 - Summary of Child's Benefits

TABLE 1
NUMBER OF ACTIVE MEMBERS

Completed Years of Service	Under 25	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	OVER 65	Total
0-4	224	822	634	638	450	211	108	46	16	2	3151
5-9		337	789	633	474	277	113	56	17	3	2699
10-14			287	906	560	333	156	80	21	3	2346
15-19			1	403	902	454	220	129	46	4	2159
20-24				2	335	580	275	162	41	6	1401
25-29					1	176	299	138	41	10	665
30-34						2	89	117	24	4	236
35-39							3	33	30	3	69
40-UP									8	3	11
TOTAL	224	1159	1711	2582	2722	2033	1263	761	244	38	12737

TABLE 2
AVERAGE SALARIES OF ACTIVE MEMBERS

Completed Years of Service	Under 25	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	OVER 65	Total
0-4	17687	18437	19849	21268	22323	22477	23813	25698	32174	43000	20442
5-9		20059	22209	23976	25539	25633	27060	31427	27571	40347	23739
10-14			24814	26531	28246	27839	27235	28661	29422	25200	27059
15-19			26000	28635	30349	31372	30977	29717	27502	28645	30205
20-24				27512	31725	32327	32415	32382	32435	32901	32205
25-29					25280	34039	33552	33366	31091	32876	33468
30-34						37839	34871	34907	34433	34948	34871
35-39							30258	35346	34455	42038	35028
40-UP									34117	37255	34973
TOTAL	17687	18908	21773	24933	27920	29598	30747	31760	31164	34238	26347

TABLE 3
ANNUAL SALARIES OF ACTIVE MEMBERS
IN THOUSANDS

Completed Years of Service	Under 25	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	OVER 65	Total
0-4	3961	15155	12584	13569	10045	4742	2572	1182	514	86	64410
5-9		6760	17523	15177	12105	7101	3057	1760	469	121	64073
10-14			7122	24036	15817	9271	4248	2293	618	76	63481
15-19			26	11540	27375	14243	6815	3833	1265	115	65212
20-24				55	10628	18749	8915	5246	1329	197	45119
25-29					25	5991	10032	4604	1275	328	22255
30-34						76	3103	4084	827	140	8230
35-39							91	1166	1034	126	2417
40-UP									273	112	385
TOTAL	3961	21915	37255	64377	75995	60173	38833	24168	7604	1301	335582

TABLE 4
NUMBER OF PART-TIME MEMBERS

Completed Years of Service	Under 25	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	OVER 65	Total
0-4	170	289	313	390	275	177	82	34	26	11	1767
5-9		15	104	89	44	40	16	12	2	1	323
10-14			12	65	37	13	13	14	1		155
15-19				5	13	14	7	10	2		51
20-24					1	2	3	2	1		9
25-29						3	2	1			6
30-34								1			1
35-39											
40-UP											
TOTAL	170	304	429	549	370	249	123	74	32	12	2312

TABLE 5
NUMBER OF VESTED INACTIVE MEMBERS

Completed Years of Service	Under 25	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	OVER 65	Total
0-4											
5-9		18	129	178	111	83	70	39	13	9	650
10-14			3	60	63	39	42	32	10	4	253
15-19				3	18	31	18	19	4	1	94
20-24					1	7	7	9			24
25-29							1	2	1	1	5
30-34								1			1
35-39									1	1	2
40-UP											
TOTAL		18	132	241	193	160	138	102	29	16	1029

TABLE 6
SUMMARY OF RETIREES

Number of Members								
Age Group								
Under 55	55-59	60-64	65-69	70-74	75-79	80-84	Over 84	Total
312	481	823	990	948	896	711	477	5638

Total Monthly Benefit								
Age Group								
Under 55	55-59	60-64	65-69	70-74	75-79	80-84	Over 84	Total
336996	495997	714432	755050	540414	355451	246208	162492	3607040

Average Monthly Benefit								
Age Group								
Under 55	55-59	60-64	65-69	70-74	75-79	80-84	Over 84	Total
1080	1031	868	763	570	397	346	341	640

TABLE 7
SUMMARY OF DISABLED

Number of Members								
Age Group								
Under 55	55-59	60-64	65-69	70-74	75-79	80-84	Over 84	Total
51	36	36	46	40	25	12	8	254

Total Monthly Benefit								
Age Group								
Under 55	55-59	60-64	65-69	70-74	75-79	80-84	Over 84	Total
26783	21422	19465	21598	15356	9740	3982	3095	121441

Average Monthly Benefit								
Age Group								
Under 55	55-59	60-64	65-69	70-74	75-79	80-84	Over 84	Total
525	595	541	470	384	390	332	387	478

TABLE 8
SUMMARY OF SURVIVORS

Number of Members								
Age Group								
Under 55	55-59	60-64	65-69	70-74	75-79	80-84	Over 84	Total
128	39	45	39	28	23	15	7	324

Total Monthly Benefit								
Age Group								
Under 55	55-59	60-64	65-69	70-74	75-79	80-84	Over 84	Total
42874	27169	22987	19642	10869	9007	6189	2795	141532

Average Monthly Benefit								
Age Group								
Under 55	55-59	60-64	65-69	70-74	75-79	80-84	Over 84	Total
335	697	511	504	388	392	413	399	437

TABLE 9
SUMMARY OF CHILD'S BENEFIT

Number of Members								
Age Group								
Under 5	5-6	7-8	9-10	11-12	13-14	15-16	Over 17	Total
4	3	4	6	9	11	13	9	59

Total Monthly Benefit								
Age Group								
Under 5	5-6	7-8	9-10	11-12	13-14	15-16	Over 17	Total
400	300	400	600	900	1100	1300	900	5900

Average Monthly Benefit								
Age Group								
Under 5	5-6	7-8	9-10	11-12	13-14	15-16	Over 17	Total
100	100	100	100	100	100	100	100	100

